# **TOE2025: The Grand Theory of Gravitation**

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# **Abstract**

According to the Grand theory of gravitation as initially presented in the book - Gravity from a new angle (2009), gravity between two objects will increase with density of the objects. The theory presents the gravity as energy and further states that the gravity is nothing but the strong nuclear force itself. By the end of 2025, either the Grand theory will evolve as much anticipated Theory of Everything (TOE), or at least the direction in which we need to search for such a theory will emerge. Any successful TOE will have the points summarized in this article.

**Keywords:** Theory of Everything (TOE), TOE2025, Grand theory, gravity, density, mass, strong nuclear force.

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#### Introduction

Anyone who is associated with a flour mill knows that the ground flour of seeds will measure less mass than the seeds from which it was made off. General assumption on this observation is that there will be loss of material while grinding the seeds into the flour. Then, why there were no attempts in finding ways to prevent massive loss of material? That is because the loss of mass is natural in an object when density of the matter decreases. There will be loss of material in grinding the seeds but that doesn't account for the total loss in the mass of the flour. Physics community is eager to come up with an explanation for galactic lensing but choose to ignore real life experiences.

Ever since I wrote the book - Gravity from a new angle (2009), linking gravity with strong nuclear force with density of matter (nucleons), most of the observations both old and new were fell inline with the theory presented in the book. In summary, the theory states that increase in the density of matter in an object will increase mass, gravity and total strong nuclear force (SNF) of that object. From my works, if it is not already evident of the effect of density of matter on the gravity, by end of 2025 a clear picture of the Theory of Everything (TOE) or at least the the direction in which we need to search for one, will emerge. Any attempt at unifying the gravity with strong nuclear force (SNF) in a TOE will have the points discussed in this article.

I haven't named the theory till now even though I proposed it 15 years ago. Because the gravity and density of the matter are strongly correlated, I am naming the theory as

the Grand (<u>Gravity</u> '<u>n</u>' <u>Density</u>) theory of gravitation. The name also befitting for the theory because it encompasses many aspects in physics.

#### Points of TOE

All the references to density in this article should be treated as uniform density.

- 1. Concept of force is a baseless notion. All the instances of force are energy interactions. Not knowing the source of energy is something else to explore further but the fact should be accepted as it is.
- 2. Interactions between multiple energy components will have a resultant energy. The difference between total energy consumed and the resultant energy will be differential energy which will act on the body of the object on which the energy components are applied.
- 3. A nucleus with densely packed nucleons will measure more mass than the one in which nucleons are placed further apart with same number of nucleons.
- 4. Total strong nuclear force in a nucleus increases with the density of the nucleons. Presence of additional SNF makes the object measure more mass.
- 5. Concept of deficit of mass is invalid. Mass of an object does vary with the density of nucleons no matter how big or small the object is.
- 6. Variance in mass of an object with a change in density invalidates the definition of mass, according to which the mass should remain the same irrespective of shape and size of the object.
- 7. Increase in density will increase the gravity of the object and vice versa. Collapse of a star or differentiation of a planet will increase the gravity of those objects.
- 8. Mass of the objects which were made of same amount of matter but with different density, such as gas nebula, star, neutron star and black hole, will be increasingly higher.
- 9. Increase in the density will also increase the components like mass, gravity and total SNF of an object. Therefore gravity is proportional to the total SNF in the object. Point size objects will have tremendous amount of gravity at short distances. In the absence of another strong force at nuclear level, it is theorized that the gravity itself as the strong nuclear force. It is being called as gravity when acting between the matter of different objects and as SNF when acting within the objet.
- 10. Earth is continuously loosing its total internal energy in keeping the moon and other satellites in orbit around it.
- 11. A revolving planet covering equal area of an orbit in equal amount of time, as described in Kepler's second law of planetary dynamics, is actually equal energy consumed in the system in a given period of time.
- 12. A moving wheel stays upright because the effect of gravity will be less at any given moment on its path. Affect of gravity on a moving wheel decreases with increase in speed of the object.
- 13. Energy in perpetual motion machines is coming from earth's internal energy.
- 14. Slingshot of a satellite consumes the internal energy of the earth.

- 15. Gravity hill anomalies around the world are real. In these places, a denser underground object could be exerting more gravity on the objects kept on the surface. Strong gravity affects the spirit in a level measuring tool and makes the phenomenon appear as an optical illusion.
- 16. Gravity of large object acts in a wide angle, making its resultant gravity less effective. When object appears as a point then its total gravity acts in a line making it more effective. Pioneer anomaly and galactic rotation curves are the effect of point size appearance of the sun and galactic center respectively.
- 17. Resultant gravity on an isolated object at the center of the earth is zero because the object doesn't fall any further, whereas the differential energy on the object equals to the total gravity of rest of the earth which acts in destabilizing the internal structure of the object.
- 18. Nuclear fission is transformation of densely packed nucleus with higher amount of total SNF into lower total SNF state by decreasing the density of nucleons. The difference in total SNF between two states will release as energy.
- 19. Nucleus don't have to split into different parts to release the energy. A tiny variance in density could also release the energy.
- 20. Positive ion will measure increasingly more mass with the positive charge because the density of the nucleus increases. Similarly, negative ion will measure decreasingly less mass with the increase in negative charge because of the decrease in density.
- 21. In a chemical reaction, the atom that receives the electron releases the energy, therefore oxygen is the real fuel in a combustion. The amount of energy released depends upon the difference in total SNF between two states of the nucleus before acquiring electron and after acquiring the electron.
- 22. Electrical energy is nuclear energy, certainly not generated by the flow of electrons. Positive ions in anode releases the energy when they acquire electrons. Even though electrons flow from cathode to anode, energy transmits from anode to cathode.
- 23. Earth's internal energy is the source for potential energy.
- 24. Mass should be replaced with energy as a fundamental unit because the mass of an object is variable on density whereas energy is not dependent on any factors.
- 25. Inverse square law is true for point size light emitting objects only. It has been invalidated for larger light emitting objects. If that is the case, does the inverse square law apply for gravity?

### Conclusion

There are many flaws in fundamental concepts in physics. The first priority should be to correct these flawed notions and then search for a final theory. TOE is like solving a jigsaw puzzle with deformed pieces. When we redefine the flawed concepts, a TOE will automatically appear from interconnectedness of the fundamental concepts.

#### References

Following are the list of works on the Grand theory of gravitation in chronological order.

1. K Marasakatla, Gravity from a new angle, 2009.

[ Available at the following links -

*Apple iBookstore:* https://itunes.apple.com/us/book/gravity-from-a-new-angle/id377392178?mt=11

Google Store: <a href="https://play.google.com/store/books/details?">https://play.google.com/store/books/details?</a>

id=pWeJeG8I\_gUC&rdid=book-

pWeJeG8I gUC&rdot=1&source=gbs vpt read&pcampaignid=books booksearch viewport

**Amazon:** https://www.amazon.com/Gravity-New-Angle-ebook/dp/B002Q0Y210/ref=tmm\_kin\_title\_0?ie=UTF8&m=AG56TWVU5XWC2]

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# **Notes**

Additional resources and updates on the theory can be found at the following links.

Research articles: <a href="https://vixra.org/author/karunakar\_marasakatla">https://vixra.org/author/karunakar\_marasakatla</a>

Youtube: https://www.youtube.com/user/kmarasakatla

X (Twitter): @kmarasakatla

## **Version history**

This article will be made available on <u>vixra.org</u> preprint server. Version-1: This version of the article is the initial publication.